

Chapter 10

Walls and Ceilings

Section 1000.0 Scope

Sec. 1000.1 General: This chapter shall govern the design and use of wall and ceiling systems and their constituent materials for buildings and structures located in a Special Flood Hazard Area.

Sec. 1000.2 Basis for Restriction: Materials treated in this chapter are those which constitute interior walls and ceilings including their finishes and structural constructions upon which they depend such as sheathing and insulation, and are restricted according to their susceptibility to flood damage. For the purpose of these Regulations, susceptibility of a given interior material or construction is dependent on one or more of the following:

- (1) Normal adhesives specified for above-grade use are water-soluble or are not resistant to alkali or acid in water, including ground seepage and vapor.
- (2) Wall or ceiling material contains wood, wood products, gypsum products, or other material which dissolves or deteriorates, loses structural integrity, or is adversely affected by water.
- (3) Wall or ceiling material is not resistant to alkali or acid in water.
- (4) Material is impervious but dimensionally unstable.
- (5) Materials absorb or retain water excessively after submergence.

Section 1001.0 Wall/Ceiling Classifications

Sec. 1001.1 Classes of Wall/Ceiling: Wall and ceiling systems and materials are divided into five classes according to the degree of vulnerability. Class 1 materials require conditions of dryness provided by W1 spaces. Class 2 materials require essentially dry spaces which may be subject to water vapor and slight seepage that is characteristic of W2 spaces. Class 3 wall and ceiling materials may be submerged in clean water during periods of intentional flooding as provided by W3 spaces. Class 4 materials may be exposed to and/or submerged in floodwaters in interior spaces and do not require special waterproofing treatments or protection. Class 5 wall and ceiling materials are permitted for partially enclosed or outside uses with essentially unmitigated flood exposure.

Sec. 1001.1.1: Materials of a given class may be used in any application for which a lower-numbered class is permitted by these Regulations. For example, concrete (a Class 5 wall/ceiling material) may be used whenever materials of Classes 1, 2, 3, 4, or 5 are permitted.

Sec. 1001.2 Classes of Typical Wall/Ceiling Materials: The following chart is intended as an aid to the Owner, Architect/Engineer, and the Building Official in assessing the vulnerability of typical materials with respect to the criteria stated in 1000.2(1-5). In disputes arising over the merits of particular products or of materials not listed below, the Building Official shall be guided by and decide on the basis of those criteria.

	Class
Asbestos-cement board	5
Brick, face or glazed	5
common	2
Cabinets, built in	
Wood	2
Metal	5

	Class
Cast stone (in waterproof mortar)	5
Chalkboards	
Slate, porcelain glass, nucite glass	5
Cement-asbestos	2
Composition, painted	2
Chipboard	1
Exterior Sheathing Grade	2
Clay tile	
Structural glazed	5
Ceramic veneer, ceramic wall tile-mortar set	4
Ceramic veneer, organic adhesives	2
Concrete	5
Concrete block	5
Corkboard	2
Doors	
Wood hollow	2
Wood, light weight panel construction	2
Wood, solid	2
Metal, hollow	5
Metal, Kalamein	2
Fiberboard panels, Vegetable types	
Sheathing grade (asphalt coated or impregnated)	2
Otherwise	1
Gypsum products	
Gypsum board	2
Keene's cement on plaster	2
Plaster, otherwise, including acoustical	2
Sheathing panels, exterior grade	2
Glass (sheets, colored tiles, panels)	4
Glass blocks	5
Hardboard	
Tempered, enamel or plastic coated	2
All other types	2
Insulation	
Foam or closed cell types	4
Batt or blanket types	1
All other types	2
Metals, non-ferrous (aluminum, copper, or zinc tiles)	3
Ferrous	5
Mineral fiberboard	1
Plastic wall tiles (polystyrene, urea formaldehyde, etc.)	
waterproof adhesives, pointed with waterproof grout	3
Set in water-soluble adhesives	2
Paint	
Polyester-epoxy and other waterproof types	4
All other types	1
Paperboard	1
Partitions, folding	
Metal	4
Wood	2
Fabric-covered types	1
Partitions, stationary	
Wood frame	4
Metal	5

	Class
Glass, unreinforced	4
Reinforced	4
Gypsum, solid or block	1
Rubber, mouldings and trim with epoxy-polyamide adhesive or latex-hydraulic cement	4
All other applications	1
Steel, (panels, trim, tile) with waterproof applications	5
With non-waterproof adhesives	2
Stone, natural solid or veneer, waterproof grout	5
Stone, artificial non-absorbent solid or veneer, waterproof grout	5
All other applications	2
Strawboard	
Exterior grade (asphalt-impregnated kraft paper)	2
All other types	1
Wall coverings	
Paper, burlap, cloth types	1
Wood	
Solid (boards, sheets, or trim)	2
Plywood	
Exterior grade	2
Otherwise	1